

## **General Disclaimer**

### **One or more of the Following Statements may affect this Document**

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

SECURITY (

AD-A142 264

7

DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S) AFOSR-TR- 84-0450		
6a. NAME OF PERFORMING ORGANIZATION Research Institute of Colorado		6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION Air Force Office of Scientific Research		
6c. ADDRESS (City, State and ZIP Code) Drake Creekside Two, Suite 200, 2629 Redwing, Fort Collins CO 80526		7b. ADDRESS (City, State and ZIP Code) Directorate of Mathematical & Information Sciences, Bolling AFB DC 20332			
8a. NAME OF FUNDING/SPONSORING ORGANIZATION AFOSR		8b. OFFICE SYMBOL (If applicable) NM	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER AFOSR-ISSA-83-00027		
8c. ADDRESS (City, State and ZIP Code) Bolling AFB DC 20332		10. SOURCE OF FUNDING NOS.			
		PROGRAM ELEMENT NO. 61102F	PROJECT NO. 2304	TASK NO. A3	WORK UNIT NO.
11. TITLE (Include Security Classification) CONDUCT OF THE INTERNATIONAL MULTIGRID CONFERENCE					
12. PERSONAL AUTHOR(S) Stephen McCormick					
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM 1/1/83 TO 30/9/83		14. DATE OF REPORT (Yr., Mo., Day) FEB 84	
				15. PAGE COUNT 51	
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB. GR.			
19. ABSTRACT (Continue on reverse if necessary and identify by block number) The 1983 International Multigrid Conference was held at Colorado's Copper Mountain Ski Resort, April 5-8. It was organized jointly by the Institute for Computational Studies at Colorado State University, U.S.A., and the Gesellschaft fur Mathematik und Datenverarbeitung Bonn, F.R. Germany, and was sponsored by the Air Force Office of Sponsored Research and National Aeronautics and Space Administration Headquarters. The conference was attended by 80 scientists, divided by institution almost equally into private industry, research laboratories, and academia. Fifteen attendees came from countries other than the U.S.A. In addition to the fruitful discussions, the most significant factor of the conference was of course the lectures. The lecturers include most of the leaders in the field of multigrid research. The program offered a nice integrated blend of theory, numerical studies, basic research, and applications. Some of the new areas of research that have surfaced since the Koln-Porz conference include: the "algebraic multigrid approach; multigrid treatment of Euler equations for inviscid fluid flow problems; (CONTINUED)					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS <input type="checkbox"/>			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL CPT John P. Thomas, Jr.			22b. TELEPHONE NUMBER (Include Area Code) (202) 767-5026		22c. OFFICE SYMBOL NM

DTIC  
SELECTED  
JUN 19 1984  
E

DTIC FILE COPY

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

ITEM #19, ABSTRACT, CONTINUED: 3-D problems; and the application of MG methods on vect and parallel computers. New results have also been achieved in the following areas: software for standard elliptic problems (finite element and finite differences); bifurcation problems; grid manipulation processes; and comparisons with other techniques. Questionnaires were sent to all participants after the conference, with about a third responding. It is encouraging to note that there was virtually unanimous enthusiasm about the conference, facilities, organization, and environment. There was especially positive response concerning the lecture content and format. It is significant that all those who responded to question 9 concerning another meeting indicated that they would like one held by 1984 or 1985. Attached to this report are the completed questionnaires and a list of the speakers and attendees.

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

FINAL REPORT

for

NASA Contract No. NASW-3773

"Conduct of the International Multigrid Conference"

Dr. Stephen McCormick

Principal Investigator

Approved for public release;  
distribution unlimited.



Research Institute of Colorado

Drake Creekside Two, Suite 200 2629 Redwing Fort Collins, Colorado 80526 (303) 226-6003

84 06 19 035

The 1983 International Multigrid Conference was held at Colorado's Copper Mountain Ski Resort, April 5-8. It was organized jointly by the Institute for Computational Studies at Colorado State University, U.S.A., and the Gesellschaft für Mathematik und Datenverarbeitung Bonn, F.R. Germany, and was sponsored by the Air Force Office of Sponsored Research and National Aeronautics and Space Administration Headquarters. The conference was attended by 80 scientists, divided by institution almost equally into private industry, research laboratories, and academia. Fifteen attendees came from countries other than U.S.A.

In addition to the fruitful discussions, the most significant factor of the conference was of course the lectures. The lecturers include most of the leaders in the field of multigrid research. The program offered a nice integrated blend of theory, numerical studies, basic research, and applications. Some of the new areas of research that have surfaced since the Köln-Porz conference include:

- the "algebraic" multigrid approach;
- multigrid treatment of Euler equations for inviscid fluid flow problems;
- 3D-Problems; and
- the application of MG methods on vector and parallel computers.

New results have also been achieved in the following areas:

- software for standard elliptic problems (finite element and finite differences);
- bifurcation problems;
- grid manipulation processes; and
- comparisons with other techniques.

Questionnaires were sent to all participants after the conference, with about a third responding. It is encouraging to note that there was virtually unanimous enthusiasm about the conference, facilities, organization, and environment. There was especially positive response concerning the lecture content and format. It is significant that all those who responded to question 9 concerning another meeting indicated that they would like one held by 1984 or 1985.

Attached to this report are the completed questionnaires and a list of the speakers and attendees.

Dr. Ramesh Agarwal  
Dept. 22, Bldg. 110  
McDonnell Douglas Research Labs  
P. O. Box 516  
St. Louis, MO 63166

Mr. Dov Bai  
Inst. for Comp. Studies  
P. O. Box 1852  
Fort Collins, CO 80522

Dr. Randy Bank  
Mathematics, C-012  
Univ of Calif, San Diego  
La Jolla, CA 92093

Dr. David Barkai  
Control Data Corp.  
Inst. for Comp. Studies  
P. O. Box 1852  
Fort Collins, CO 80522

Dr. Alda Behie  
Computer Modeling Group  
Univ. of Calgary  
7th Floor, Library Tower  
Calgary, Alberta T2L 2A6  
CANADA

Dr. Achi Brandt  
Inst. for Comp. Studies  
P. O. Box 1852  
Fort Collins, CO 80522

Dr. David Caughey  
218 Upson Hall  
Cornell University  
Ithaca, NY 14853

Dr. Joel Dendy  
MS 610  
Los Alamos Scientific Lab  
P. O. Box 1663  
Los Alamos, NM 87544

Dr. B. Favini  
Universita degli Studi de Roma  
Istituto di Meccanica Applicata  
Alle Macchine  
Via Eudossiana, 18  
00184, ROMA, ITALY

Dr. P. A. Forsyth, Jr.  
Computer Modeling Group  
University of Calgary  
7th Floor, Library Tower  
Calgary, Alberta T2L 2A6  
CANADA

Dr. Anne Greenbaum  
Lawrence Livermore Lab  
Box 808, L-61  
Univ. of California  
Livermore, CA 94550

Dr. Wolfgang Hackbusch  
Institut fur Informatik  
Christian-Albrechts Univ Kiel  
Olshausenstr, 40-60  
D-2300 Kiel 1  
F. R. GERMANY

Dr. Tony Jamieson  
Dept of Engineering  
Princeton Univ  
Princeton, NJ 98544

Dr. Dennis Jespersen  
MS 202A-1  
NASA Ames Research Center  
Moffett Field, CA 94035

Dr. Gary Johnson  
MS 5-9  
NASA Lewis Research Center  
Cleveland, OH 44135

Dr. Kirk Jordan  
Exxon Research & Engineering  
P.O. Box 45  
Linden, NJ 07036

Dr. H. N. Lee  
Dept. of Meteorology  
819 Wm. C. Browning Bldg.  
Salt Lake City, UT 84112

Dr. Doug McCarthy  
Computer Science Dept.  
Purdue University  
West Lafayette, IN 47907

Dr. Steve McCormick  
Inst. for Comp. Studies  
P.O. Box 1852  
Fort Collins, CO 80522

Dr. Hans Mittelmann  
Wesler Hall 216  
Arizona State Univ.  
Tempe, AZ 85282

Dr. T. Phillips  
ICASE  
Mail Stop 132C  
NASA Langley Research Center  
Hampton, VA 23665

Dr. John Ruge  
Inst. for Comp. Studies  
P.O. Box 1852  
Fort Collins, CO 80522

Dr. Steve Schaffer  
Inst. for Comp. Studies  
P.O. Box 1852  
Fort Collins, CO 80522

Dr. C. Streett  
Inst. Computer Appl in Sci  
and Engr.  
NASA Langley Research Center  
Hampton, VA 23665

Dr. Klaus Stuben  
GMD/IMA  
Postfach 1240  
Schloß Birlinghoven  
B-5205 St. Augustine 1  
F. R. GERMANY

Dr. Frank Thames  
MS 360  
NASA Langley Research Center  
Hampton, VA 23665

Dr. Jim Thomas  
Inst. for Comp. Studies  
P. O. Box 1852  
Fort Collins, CO 80522

Dr. Ulrich Trottenberg  
GMD/IMA  
Postfach 1240  
Schloß Birlinghoven  
D-5205 St. Augustin 1  
F. R. GERMANY

Dr. John VanRosendale  
Inst. for Computer Appl  
in Sci and Engr  
NASA Langley Research Center  
Hampton, VA 23665

Dr. R. Verfurth  
Ruh-Universitat Bochum  
Institut for Mathematik  
Bochum 463 GERMANY

Dr. Piet Wesseling  
Dept. of Math & Informatics  
Technische Hogeschool Delft  
Julianalaan 132, 2628 BL Delft  
THE NETHERLANDS

Dr. T. Zang  
Inst. Computer Appl in  
Sci & Engr  
NASA Langley Research Center  
Hampton, VA 23665



Clifford N. Arnold  
Control Data Corp.  
ADLOPS-4250 Fernwood  
Arden Hills, MN 55112

Greg Astfalk  
Western Electric Company  
P.O. Box 900  
Princeton, NJ 08540

Ed Caughran  
Inst. for Comp. Studies  
P.O. Box 1852  
Fort Collins, CO 80522

Chuen-Yen Chow  
Univ of Colorado  
Campus Box 429  
Boulder, CO 80309

Juliana Chow  
National Center for  
Atmospheric Res.  
P.O. Box 3000  
Boulder, CO 80307

Paul Ciesielski  
Dept. of Atmospheric Sci  
Colorado State Univ  
Fort Collins, CO 80523

Ken Cline  
Harvey Mudd College  
Claremont, CA 91711

Chris Curzon  
Harvey Mudd College  
Claremont, CA 91711

Mark DeMario  
Dept. of Atmospheric Sci.  
Colorado State Univ  
Fort Collins, CO 80523

J. C. Diaz  
Mobil Oil Corp.  
Explor & Prod Res Div  
13777 Midway Road  
Farmers Branch, TX 75234

M. S. El-Mandouh  
Mobil Oil Company  
1377 Midway Road  
Farmers Branch, TX 75234

Dieter Epper  
Inst. fur Physics  
GKSS - Research Center  
D-2054 Geesthacht  
GERMANY

Alain Forestier  
CEA-IRDI Centre D-Etudes  
Nuclearies De Saclay  
DEMT/Serma  
91191-GIF sur Yvette Cedex  
FRANCE

David Fox  
Math and Info Systems  
AFOSR/NM  
Bolling AFB  
Washington, D.C. 20332

Scott Fulton  
Dept. of Atmospheric Sci  
Colorado State Univ  
Fort Collins, CO 80523

Karl Gustafson  
Univ of Colorado  
Dept of Mathematics  
Box 426  
Boulder, CO 80309

Dr. H. Holstein  
Dept. of Computer Science  
U.C.W. Aberystwyth  
Dyfed, SY 23 3BZ, U.K.

W. R. Jines  
Mobil Oil Company  
13777 Midway Road  
Farmers Branch, TX 75234

R. W. Jones  
Mobil Oil Corp.  
Exploration & Prod Res Div  
13777 Midway Road  
Farmers Branch, TX 75234

Dr. Michael J. Kascic, Jr.  
Control Data Corp.  
8100 34th Ave. So M/S HZN10V  
Minneapolis, MN 55440

Art Lazanoff  
Inst. for Comp. Studies  
P.O. Box 1852  
Fort Collins, CO 80522

John V. MacGuire  
McDonnell Douglas  
Mail Stop 36-81,  
3855 Lakewood Blvd.  
Long Beach, CA 90846

Tom Mantourer  
Los Alamos National Lab  
C3MSB265  
Los Alamos, MN 87545

Oliver A. McBryan  
Courant Institute, NY Univ.  
251 Mercer Street  
New York, NY 10012

Major Ed Oliver  
AFOSR/NM  
Bldg. 410 Bolling AFB  
Washington, D.C. 20332

George W. Package  
Cray Research, Inc.  
One Northgate Square  
Greensburg, PA 15601

L. Padman Abhan  
Chevron Oil Field Research  
P.O. Box 446  
La Habra, CA 90631

Seymour Parter  
Math Dept.  
Univ of Wisconsin-Madison  
Madison, WI 53706

M. D. Ray  
Mobil Oil Company  
13777 Midway Road  
Farmers Branch, TX 75234

Ted Reyhner  
Boeing Company MS9W-61  
Box 3707  
Seattle, WA 98124

Mark Reimers  
Dept of Mathematics  
Univ of British Columbia  
Vancouver, British Columbia

Patrick J. Roache  
Ecodynamics  
P.O. Box 8172  
Albuquerque, NM 87193

Stan Rudman  
Grumman Aerospace Corp.  
MSA 08-35  
Bethpage, NY 11714

Dean Schank  
Marathon Oil Company  
7400 S. Broadway  
Littleton, CO 80121

Roy W. Wessel  
Control Data Corp.  
3545 Arthur Court  
Boulder, CO 80302

Wayne Schubert  
Dept. of Atmospheric Sci.  
Colorado State University  
Fort Collins, CO 80523

Matthew Yedlin  
CONOCO  
1000 South Pine  
Ponca City, OK 74601

Arthur S. Shieh  
EG&G Idaho, Inc.  
P.O. Box 1625  
Idaho Falls, ID 83415

David Young  
Boeing Computer  
565 Andover Park W., MS 9C-01  
Tukwila, WA 98188

Greg Slaughter  
Harvey Mudd College  
Claremont, CA 91711

John Zelenka  
Control Data Corp.  
8100-34th Ave. So M/SH QN10V  
Minneapolis, MN 55440

Roland A. Sweet  
National Bureau of Standards  
Div. 713, 325 Broadway  
Boulder, CO 80303

William G. Szymczak  
Naval Surface Weapons Center  
Applied Math Br, CODE-R44  
White Oak, Silver Spring, MD  
20910

Jerry Taylor  
Dept. of Atmospheric Sci  
Colorado State University  
Fort Collins, CO 80523

G. W. Thomas  
Scientific Software Corp.  
1801 California Street  
Denver, CO 80112

William Thompson  
Naval Environmental Prediction  
Research Facility  
Monterey, CA 93940

John Charles Vossberg  
McDonnell Douglas Long Beach  
3855 Lakewood Blvd  
Mail Stop 36-81  
Long Beach, CA 90846

Alan J. Wallcraft  
Jaycor  
NORDA Code 324  
NSTL Station, MS 39529

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
MAY 1983  
INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference? (

*Very important and very beneficial. I like conferences where I do not need an automobile, where the participants are relatively isolated from the outside world, and where some physical activity is possible.*

2. From which lectures or types of lectures did you benefit most?

*Brandt's survey lecture (not the paper), Stuben's paper on Algebraic Multigrid, Thames' paper on mesh generation, and papers by Caughey, Jameson, and Jespersen.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*I like a tight order of the paper presentations, which corresponds to the published schedule.*

*There was a problem starting the sessions at 8:00am because the restaurant did not open until 7:30am and service was slow.* (

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*1. Algebraic Multigrid concepts. 2. Confirmation of my suspicions, dating back to 1977, that MG will have trouble with high Reynolds number problems unless upwind differencing is used on coarse grids. (MG makes the cell Reynolds number problem worse.) 3. Awareness of the wide variety of cycling schemes used. (I still think Cycle C is best.) 4. Difficulty of proper smoothing algorithm for complex prob'*

5. How did the conference contribute to your own professional activities?

*Definitely helped, notably in the areas of three-dimensional grid generation, fluid dynamics, and electric field calculations.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*Developer of algorithms and codes for solving 2D and 3D problems of fluid dynamics and electrostatics, especially in boundary-fitted non-orthogonal coordinates. Benefitted from contacts with both other "practitioners" and with the intelligible theoretical people.*

7. What were the conference's good and bad points?

*Good: location, scheduling, quality of the best speakers, lodging*

*Bad: The written papers, abstracts, and conference schedule were poorly organized. Even a conference with an informal atmosphere needs a firm schedule, sent at least one week ahead of the conference to the attendees, \**

8. In your opinion, was the conference a success or failure?

*Unqualified success; one of the best conferences I have attended in years.*

9. Would you like to see another MG Conference (who, when and where)?

*Yes; same community + any other contributors who know what they are doing; - one or one and 1/2 year intervals. I like Colorado, but the international flavor and cooperation would be enhanced by moving it around. How about a conference nominally every 1 1/2 years, with late-winter/spring meetings in Colorado alternating with a late-summer/fall meeting in Europe (Germany, Holland, Britain) or Israel?*

10. Additional comments:

*\* and a booklet of 1- or 2-page abstracts bound together in the order of presentation. With more effort and organizational money, one can provide the actual papers in a bound volume as the AIAA does, but this requires more lead time and cuts out the most recent results. However, the booklet of abstracts is not difficult and helps immensely in planning and taking notes, and should be absolutely required from the authors. As an option, in addition to the bound abstracts, the authors can also provide drafts of the full papers, as done at this conference, but these must be STAPLED! The situation of having a lap full of 20 papers, unstapled, not in any \*\**

Name Optional

*Pat Roache*  
Patrick J. Roache

*\*\*order (either alphabetical on authors names, or in order of presentation), and contending with changes in the order of papers from the schedule, all the while trying to take notes, detracted from the experience. I know other conferences have the same problems, but it is unnecessary.*

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*The choice of a recreational resort contributed to a relaxed environment which I think is important to a good conference*

2. From which lectures or types of lectures did you benefit most?

*Those involving multigrid applications to parabolic & hyperbolic type probs.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*I thought the program was well-conceived & spanned the technology (theoretical to applied). Scheduling did not allow too much time for in depth discussion.*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*I learned that we have a long way to go to make multigrid work in complex reservoir simulation problems - Applications to reservoir simulation.*

5. How did the conference contribute to your own professional activities?

*Was enlightening with regard to giving an update as to where we stand. We are not actively pursuing multigrid methods, but rather are monitoring progress in this area.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*Researcher with applications  
orientation.*

7. What were the conference's good and bad points?

*(Bad) Too many speakers scheduled each day.  
(Good) Good international representation; small  
group enhancing informality & communication;  
areas of technology well represented.*

8. In your opinion, was the conference a success or failure?

*Success.*

9. Would you like to see another MG Conference (who, when and where)?

*Yes - Possibly biannually;  
Spring is a good time assuming the  
season will not be bypassed as in Colo.  
this yr. I like the notion of a Colorado*

10. Additional comments:

*mta resort & the AM-evening  
sessions w/after lunch free.  
This format has been used  
to good advantage at other  
conferences I've attended  
(Gordon Research Conf.,  
Pembroke Conf., SPE  
forums, etc).*

*Ed Thomas*

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 1983

INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

ENVIRONMENT WAS INFORMAL - LED TO A  
RELAXED ATMOSPHERE - GOOD FOR EXCHANGING  
IDEAS

2. From which lectures or types of lectures did you benefit most?

- LECTURES PERTAINING TO MY OWN AREA OF  
RESEARCH (IE. RESERVOIR SIMULATION) WERE  
MOST INTERESTING

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

- WELL ORGANIZED

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

5. How did the conference contribute to your own professional activities?

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

PRACTITIONER - YES I BENEFITED FROM CONTACT  
WITH BASIC RESEARCHERS

7. What were the conference's good and bad points?

- VERY WELL ORGANIZED CONFERENCE  
- GREAT SKIING

8. In your opinion, was the conference a success or failure?

- SUCCESS

9. Would you like to see another MG Conference (who, when and where)?

YES I WOULD LIKE TO SEE ANOTHER MG  
CONFERENCE

- IN 1-2 YEARS - WESTERN US IS A GOOD  
LOCATION FOR ME .

10. Additional comments:

Aeda Lohi

Name Optional



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 16 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

Copper Mountain was pleasant and made the  
conference more enjoyable. Conference room itself  
was much too crowded.

2. From which lectures or types of lectures did you benefit most?

The lectures on multidimensional flow.

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

okay

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

Yes, general understanding of multilevel.

5. How did the conference contribute to your own professional activities?

Plan to use multilevel in the near future,  
make interesting contacts with other people.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Yes, applied researcher with basic researcher.

7. What were the conference's good and bad points?

Bad - crowded room.

Good - most speakers.

8. In your opinion, was the conference a success or failure?

Success!

9. Would you like to see another MG Conference (who, when and where)?

Yes, ~ 1 - 1 1/2 year, "nice" geographical location - in US

10. Additional comments:

Greg As Hall  
Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
MAY 18 1983  
& INSTITUTE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Beautiful environment with positive influence on conference.*

2. From which lectures or types of lectures did you benefit most?

*For me the most beneficial were those dealing with multigrid applied to specific problems.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*Conference was well-planned; scheduling was unusual (8-12, 5-6<sup>30</sup>) but worked out well.*

*Programming was well done. Lecture room needed to be bigger.*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*Main value for me was in learning how other people with similar problems treat them via multigrid. The important areas to me were fluid dynamics applications and nonsymmetric problems.*

5. How did the conference contribute to your own professional activities?

*Keeps me abreast of the latest in multigrid.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*Applications - practitioner.*

*I must say the theoreticians and those engaged in solving Laplace's equation didn't have much to offer me.*

7. What were the conference's good and bad points?

*Good: top people in field, beautiful setting*

*Bad: small lecture room, a couple of bad talks.*

8. In your opinion, was the conference a success or failure?

*Success.*

9. Would you like to see another MG Conference (who, when and where)?

*?*

10. Additional comments:

*Herman J. Jepsen*  
Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 31 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

environment was really nice; housing, however, was a little bit expensive; the effect for the conf. was, that you always had a bad conscience, either because you didn't ski or because you didn't go.

2. From which lectures or types of lectures did you benefit most?

the lectures from the engineering practitioners on the 2nd day

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

schedule was in general good, but too heavily packed; sessions should start later (I am); the room was too small

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

I learned a lot from the applications in fluid mechanics and aerodynamics

5. How did the conference contribute to your own professional activities?

gave me ideas and problems from the appl. of 4)

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

basic researcher / contact with practitioners was most stimulating

7. What were the conference's good and bad points?

good environment

bad: too short a time to adapt to the climate / no library

8. In your opinion, was the conference a success or failure?

success

9. Would you like to see another MG Conference (who, when and where)?

yes / '84 or '85 / next time perhaps Fort Collins -

10. Additional comments:

The personal organization of Denis Thomas was extremely wonderful, a lot of thanks.

R. Kupin

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*The environment was very enjoyable and relaxing to me.  
I think it had a very positive effect upon the conference in that  
our saturation points were increased.*

2. From which lectures or types of lectures did you benefit most?

*lectures which dealt with general concepts and ideas, instead of  
specific problems*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*AMG  
spectral multigrid - someone in our group is working on this and  
it was interesting to me as well*

5. How did the conference contribute to your own professional activities?

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*As a basic researcher I benefited most from the talks on concepts since no one really addressed the specific area that I am working on*

7. What were the conference's good and bad points?

*Good points - well organized, relaxed atmosphere, afternoon break*

*Bad points - conference room too crowded*

8. In your opinion, was the conference a success or failure?

9. Would you like to see another MG Conference (who, when and where)?

10. Additional comments:

Paul E. Cisillolli

Name Optional



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*It was very nice; the casual atmosphere carried over nicely into the sessions.*

2. From which lectures or types of lectures did you benefit most?

*I enjoyed the mix of basic and applied papers.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*The schedule, with afternoons free, was very relaxing.*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*I carried away a better appreciation for the breadth of fields affected by multi-grid; also received specific comments relating to my own special area.*

5. How did the conference contribute to your own professional activities?

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Basic researcher & teacher.  
Yes, the cross-fertilization is essential.

7. What were the conference's good and bad points?

Good: location, quality of speakers  
Bad: ?

8. In your opinion, was the conference a success or failure?

A successful bringing together of basic & applied researchers.

9. Would you like to see another MG Conference (who, when and where)?

Yes, but probably no more often than every two or three years.

10. Additional comments:

---

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

MAY 25 1983

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*It helped create a relaxed atmosphere; not having continual lectures from 8:00 am to 5:00 pm. (as is common in other conferences) helped increase the amount I could learn (i.e., I didn't get burned out).*

2. From which lectures or types of lectures did you benefit most?

*The lectures given in Session II (Wed. evening)*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*I was very interested to learn about AMG (Algebraic Multigrid) theory and results.*

5. How did the conference contribute to your own professional activities?

*It helped me to get a better handle on what has been done with multigrid methods and what applications are currently being investigated.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Graduate student involved in basic research on solving spectral equations using multigrid techniques.

7. What were the conference's good and bad points?

8. In your opinion, was the conference a success or failure?

success

9. Would you like to see another MG Conference (who, when and where)?

10. Additional comments:

- 1) The lecture room was extremely cramped
- 2) Somehow I managed to get a room directly over a bar in which a live band played each night. Consequently I did not get much of a chance to sleep.

Scott R. Fulton

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

Excellent

2. From which lectures or types of lectures did you benefit most?

Having the Proceedings Available at the Conference

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

Excellent. But Friday morning checkout  
Requirement badly affected attendance then

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

Multigrid status  
Transonic applications

5. How did the conference contribute to your own professional activities?

Helped in my teaching of seminar

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Question too diffuse

7. What were the conference's good and bad points?

on a chair lift, a  
colleague must answer  
your questions!

food service, especially  
breakfast

8. In your opinion, was the conference a success or failure?

Success

9. Would you like to see another MG Conference (who, when and where)?

Sure, same place, but aren't there  
already many?

10. Additional comments:

You did a good job Steve.

K. Gustafson

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 13 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Excellent environment, stimulated attendance, contributed to personal exchanges*

2. From which lectures or types of lectures did you benefit most?

*Detailed scientific reports & surveys*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*Generally well done*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*yes. As an outsider to this specialty I gained insight into the nature of problems, kinds of activities & results, and attitudes of principal workers*

5. How did the conference contribute to your own professional activities?

*gained insight into an active area of research*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

7. What were the conference's good and bad points?

*Few bad points, many good. good selection of speakers  
& good location*

8. In your opinion, was the conference a success or failure?

*=====*

9. Would you like to see another MG Conference (who, when and where)?

*yes in 1-2 yrs*

10. Additional comments:

*In many ways this was a model <sup>for</sup> attractive  
scientifically useful meetings*

\_\_\_\_\_  
Name Optional

*David W. Fox*



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 11 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

The meeting room was quite crowded, but otherwise suitable. It was unfortunate that we were left in the dark as to food facilities on the first evening and morning.

2. From which lectures or types of lectures did you benefit most?

I benefit most from the lectures which deal mostly with computer techniques, rather than with the underlying math theories.

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

Fine.

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

It was interesting to see that more people in the session were interested in accuracy than in time and cost of computations.

5. How did the conference contribute to your own professional activities?

I am better able to deal with my customers when I know what their interest are.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

I am a pre-sales analyst for a computer vendor, CRAY RESEARCH.  
I had beneficial contact with several people.

7. What were the conference's good and bad points?

GOOD: lectures, people, skiing.

BAD: food services, condos(instead of singles), incorrect spelling of names on lists.

8. In your opinion, was the conference a success or failure?

Success.

9. Would you like to see another MG Conference (who, when and where)?

Yes.

10. Additional comments:

Please keep me on your mailing list for all conferences that might possibly interest a computer analyst.

Thank you.

GEORGE W. PACKAGE

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 09 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*single* I did not like the location. The conference facilities were just OK, but the room rates were far too high and the cold was not very pleasant either. Obviously, I am a non-skier.

2. From which lectures or types of lectures did you benefit most?

*lectures* The first session was by far the best. The most beneficial sessions were those in dealing with large, 3-dimensional problems ~~having~~ fairly simple PDEs, ~~involving~~.

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

I thought the schedule and program were well done.

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

I learned a great deal in the areas mentioned above in no. 2.

5. How did the conference contribute to your own professional activities?

The conference was very valuable in that it increased my confidence in my knowledge of multi-grid and also acquainted me with the current state-of-the-art in multi-grid. I also met some of the minor dieties of the field like R. L. A. McLaughlin.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

I am a basic researcher in numerical modeling of atmospheric processes near the surface of the earth. As such, I am a user of multi-grid techniques. I found it very useful to talk to others involved both use and development of multi-grid techniques.

7. What were the conference's good and bad points?

My only complaint is on the location. As a federal employee, my per diem did not even cover the cost. I had to make up the difference with my own funds.

8. In your opinion, was the conference a success or failure?

It was a big success. As ~~was~~ alluded to in no. 6 above, it is always beneficial to bring together workers having different backgrounds because it allows for valuable interaction.

9. Would you like to see another MG Conference (who, when and where)?

Yes, very much. I think that one year from now would be a good time. As for the location, any place other than a resort area would be fine.

10. Additional comments:

William Thompson  
Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

RECEIVED

MAY 16 1983

CONFERENCES  
& INSTITUTES

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Beneficial. "Small town" atmosphere facilitated talking to people.*

2. From which lectures or types of lectures did you benefit most?

*Those comparing multigrid with other methods on realistic problems.  
I like to see both theoretical work and computational results.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*Very educational. Randy Bank's talk & Archie Brandt's were informative.  
The talks of Behie & Forsyth and Gary McCormick & Sweet were particularly  
relevant to my work. The work on algebraic multigrid (Brandt, McCormick, Ruge,  
and Stulen, Trottenberg) was also good. Toni Janáček's talk was worthwhile.*

5. How did the conference contribute to your own professional activities?

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*basic researcher / practitioner. My work requires both activities.*

7. What were the conference's good and bad points?

*Good points: Planned dinner & banquet.*

*Bad points: No donuts between sessions. Lack of restaurants for early breakfast.*

8. In your opinion, was the conference a success or failure?

*success*

9. Would you like to see another MG Conference (who, when and where)?

*E.g. Should have Archie Brundt & Randy Bank.*

10. Additional comments:

*• Very good conference*

*David P. Young*

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
MAY 16 1983  
CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

The environment were very suitable for the conference

2. From which lectures or types of lectures did you benefit most?

Lectures that covered some of the theoretical aspects of Multigrid.

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

Planning and coordination was great.

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

The conference was very informative to myself.

The AMG was the area that I ~~most~~ enjoyed the most.

5. How did the conference contribute to your own professional activities?

The AMG coverage convinced me that we will have a true black box multigrids in the near future.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

basic researcher and lots of activities in  
real applications. I believe I learn more  
from CSU basic researchers.

7. What were the conference's good and bad points?

bad point: being a little too long.  
good points: topics covered

8. In your opinion, was the conference a success or failure?

a success

9. Would you like to see another MG Conference (who, when and where)?

Maybe in another year. The same  
location is fine

10. Additional comments:

Great job over all

M. J. Mandouk

Name Optional



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

MAY 8 1983

CONF. & INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference? (   
*SKING WAS FUN, BUT IT DEFINITELY ~~DETRA~~ CUTS  
DOWN ON THE ACCOMPLISHMENTS OF THE CONFERENCE.  
FOR ONE THING IT OCCUPIES A SIGNIFICANT  
AMOUNT OF TIME.*
2. From which lectures or types of lectures did you benefit most?  
*NOT BEING A MATHEMATICIAN, I GOT MORE OUT OF  
THE PAPERS WITH AN ENGINEERING APPROACH.*
3. Please comment on the planning of the schedule and program (timings, topics, etc.)  
*SCHEDULE WAS FINE, EXCEPT FOR THE PROBLEM  
WITH GETTING BREAKFAST (SINCE NOTHING WAS OPEN)*
4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?  
*THE CONFERENCE HAS GIVEN ME IDEAS ON THINGS  
TO TRY (IF I HAVE TIME). I HAVE GOTTEN A  
BETTER FEEL FOR WHAT IS POSSIBLE USING  
MULTIGRID.*
5. How did the conference contribute to your own professional activities?  
*SEE (4.)*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

BASIC RESEARCH IN COMPUTATIONAL FLUID MECHANICS.  
USER OF MULTIGRID TO SPEED COMPUTATIONS.  
I HAD BENEFICIAL CONTACT WITH OTHERS.

7. What were the conference's good and bad points?

THE CONFERENCE'S BAD POINT (WITH RESPECT TO ME)  
WAS THE VERY MATHEMATICAL (NOTATION, ETC) NATURE  
OF THE ~~PAPERS~~ PRESENTATIONS. MANY POOR  
PRESENTATIONS (TYPICAL).

8. In your opinion, was the conference a success or failure?

SUCCESS

9. Would you like to see another MG Conference (who, when and where)?

ABOUT EVERY 2 YEARS. NOT MUCH USE TO ME  
UNLESS IN THE U.S.

10. Additional comments:

Theodore J. Beyher

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
MAY 23 1983

CONFERENCE  
INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

GOOD ENVIRONMENT - CO. MOVE TO INFORMAL DISCUSSION.

2. From which lectures or types of lectures did you benefit most?

1. ALGEBRAIC MULTIGRID

2. APPLICATIONS OF MULTIGRID

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

GOOD

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

YES

SEE 2. ABOVE

5. How did the conference contribute to your own professional activities?

IMPROVED COMMUNICATIONS WITH MATHEMATICAL  
MULTIGRID COMMUNITY.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

ENGINEERING RESEARCHER

CONTACT WITH M-G MATHEMATICIANS WAS BENEFICIAL

7. What were the conference's good and bad points?

BAD - THE CONFERENCE ROOM WAS TOO SMALL

GOOD - EVERYTHING ELSE

8. In your opinion, was the conference a success or failure?

SUCCESS

9. Would you like to see another MG Conference (who, when and where)?

YES, EVERY TWO YEARS OR SO, ALTERNATING  
BETWEEN NORTH AMERICA AND EUROPE

10. Additional comments:

THANKS FOR THE GOOD WORK MS. THOMAS!

GARY M. JOHNSON

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED

JUN 24 1983

CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Environment was most attractive, however, I don't ski!  
Lack of dining facilities is a problem; Copper Mountain's handling  
of food arrangements was courteous & enthusiastic, but disorganized  
and sometimes a bit crude. The accommodations were pleasant, but confusing.*

2. From which lectures or types of lectures did you benefit most? *Lecture & meeting facilities are good.*

*These are so specialized that they are all of  
interest. My main interests were in fluid dynamics,  
but general ideas are of great value in this subject.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*Timing was fine, program materials of the best sort to  
appear so far at a general multigrid conference. Papers  
were generally of very high quality.*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*No question a great deal was learned - can't tell  
a priori which ideas will be of most use in future.*

5. How did the conference contribute to your own professional activities?

*Main benefit, aside from technical exchange, is  
opportunity to meet other practitioners. Such things  
are essential to professional activity.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*I'm a basic researcher by nature, a practitioner by necessity. No question that the spectrum of interests present was one of the major strengths of the conference.*

7. What were the conference's good and bad points?

*(Covered rather thoroughly above)*

8. In your opinion, was the conference a success or failure?

*This is clearly a success, but see 9.*

9. Would you like to see another MG Conference (who, when and where)?

*Yes; however, it should be noted that it takes a while in this field before there is good deal of quality material to present. Frequency may be the enemy of quality.*

10. Additional comments:

Douglas R. McCarley  
Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*A good relaxing environment*

2. From which lectures or types of lectures did you benefit most?

*Most were beneficial, both general and topical*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*It was very useful to have the afternoons free*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*Multigrid in fluid flow problems*

5. How did the conference contribute to your own professional activities?

*New contacts*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Basic researcher. The contact with real application was useful.

7. What were the conference's good and bad points?

Good points: Broad cross section of interests, ample opportunity for interaction

Bad points: Banquet fare was adequate but needing

8. In your opinion, was the conference a success or failure?

9. Would you like to see another MG Conference (who, when and where)?

Yes, a year or two, Vail

10. Additional comments:

Steve Schaffer

Name Optional



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
JUN 04 1983  
CONFERENCE  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

it was very pleasant, and had a good effect.  
having talks in the morning and evening rather than afternoons  
was especially a good idea.

2. From which lectures or types of lectures did you benefit most?

those on new research topics such as AMG,  
and accessible theory talks like Anne Broadbent's

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

very well planned

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

learning the problems and successes of objective  
multigrid was important to me as well as informal  
conversations with attendees

5. How did the conference contribute to your own professional activities?

it stimulated several areas of research I'm  
pursuing, particularly on Helmholtz equations

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

basic researcher. I benefited from learning about some of the problems faced by people of Exxon in ecosystems.

7. What were the conference's good and bad points?

The gap between the really theoretical work and really applied was so great people had trouble bridging it. But the mix of topics was quite good and I have a feel for the current state of the art.

8. In your opinion, was the conference a success or failure?

success

9. Would you like to see another MG Conference (who, when and where)?

yes, in about 2 years. Almost an exact repeat would be fine or it could be given by Max Hymen, Joel Derby at Los Alamos

10. Additional comments:

John Van Rosendale  
Name Optional

25.5.83

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

DR. H. HOLSTEIN  
DEPT. COMPUTER SCIENCE  
UNIV. COLLEGE OF WALES  
ABERYSTWYTH  
GT. BRITAIN SY23 3BZ

CONFERENCE QUESTIONNAIRE

Please return by May 30 ← Sorry!

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Interesting & convenient*

2. From which lectures or types of lectures did you benefit most?

*Theoretical aspects of MG.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*4 sessions in mornings rather heavy. Spread of topics good.  
Little time for discussion at end of papers. Could some formal  
discussion <sup>sessions</sup> ~~groups~~ have been included in the planning?*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

- 1. MG content*
- 2. Good ~~set~~ selection of speakers, for making contact*
- 3. model for Bristol MG meeting.*

5. How did the conference contribute to your own professional activities?

*Hope to apply MG methods to Non-Newtonian problems.*

*Dear Jean, Thanks for a pleasant conference and  
for help received afterwards. Would you pass on the enclosed?*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

RECEIVED  
MAY 9 1 1983  
CONFERENCES  
& INSTITUTES

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)
7. What were the conference's good and bad points?
8. In your opinion, was the conference a success or failure?
9. Would you like to see another MG Conference (who, when and where)?
10. Additional comments:

---

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

RECEIVED  
MAY 31 1983  
CONFERENCES  
& INSTITUTES

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*Physical environment was very nice to say the least*

2. From which lectures or types of lectures did you benefit most?

*Most interested in those lectures dealing with the practical implementation of MG*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*Well thought-out and planned. Difficult to see how it could have been much better.*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*Yes. A great deal about algebraic multigrid*

5. How did the conference contribute to your own professional activities?

*Contact with individuals performing similar work is always helpful.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

*Basic research & development of numerical methods  
for CFD. Yes.*

7. What were the conference's good and bad points?

*Good: location, organization, participants*

*Bad: Meeting room was too small*

8. In your opinion, was the conference a success or failure?

*Success.*

9. Would you like to see another MG Conference (who, when and where)?

*Yes. Who: Whoever is crazy enough to put up with such a  
hassle.*

*When: Spring '85*

*Where: New Orleans, New England ski area, Canada*

10. Additional comments:

---

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

MAY 06 1983

CONF. & INSTITUTE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*very pleasant.*

2. From which lectures or types of lectures did you benefit most?

*Got good general background from most of them.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*good*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*yes I was impressed by the wide applicability  
of the multigrid approach.*

5. How did the conference contribute to your own professional activities?

*I intend to use the multigrid approach at the  
first opportunity*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

As a computer scientist and consultant I had the chance to talk with people who may be dealing with me professionally in the future, as well as some I am dealing with now.

7. What were the conference's good and bad points?

The good points were: (a) no simultaneous sessions (b) well organized, punctual presentations (c) proceedings immediately available — bad points: Wednesday night's dinner.

8. In your opinion, was the conference a success or failure?

Definitely a success.

9. Would you like to see another MG Conference (who, when and where)?

Yes. Same time and place next year.

10. Additional comments:

W. Roy Livesset  
Name Optional



INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

The atmosphere was relaxed, which was  
very beneficial.

2. From which lectures or types of lectures did you benefit most?

AMG and Spectral multigrid.

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

AMG, Spectral Multigrid

5. How did the conference contribute to your own professional activities?

We are attempting to apply  
multigrid methods to atmospheric  
science problems.

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)? Did you have beneficial contact with others involved in different activities? (e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

practitioner/basic researcher in geophysical fluid dynamics.

7. What were the conference's good and bad points?

Fairly good mix of <sup>research</sup> activities by participants. We need more geophysical fluid dynamicists interested.

8. In your opinion, was the conference a success or failure?

Success!

9. Would you like to see another MG Conference (who, when and where)?

I would very much like to see the multigrid activities at CSU flourish. Perhaps another conference in about 2 years would be helpful for this.

10. Additional comments:

Wayne Schubert

Name Optional

INTERNATIONAL MULTIGRID CONFERENCE

APRIL 5-8, 1983

COPPER MOUNTAIN, COLORADO

CONFERENCE QUESTIONNAIRE

Please return by May 30

To: Gloria Jean Thomas, Conference Coordinator  
Department of Conferences and Institutes  
Rockwell Hall  
Colorado State University  
Fort Collins, Co 80523

1. What do you think about the environment and how it affected the conference?

*The setting and facilities were quite pleasant and contributed to the success of the conference.*

2. From which lectures or types of lectures did you benefit most?

*I particularly enjoyed the grouping of AMG lectures.*

3. Please comment on the planning of the schedule and program (timings, topics, etc.)

*Well-planned*

4. Please comment on the educational value of the conference. Did you learn anything from attending the conference? If so, what specific areas were important to you?

*I think I learned the most about AMG. Many of the other talks were too short to really get anything more than a superficial understanding - but this from a non-expert in MG.*

5. How did the conference contribute to your own professional activities?

*I made contacts with people working in this area which will be valuable for future MG work.*

INTERNATIONAL MULTIGRID CONFERENCE  
APRIL 5-8, 1983  
CONFERENCE QUESTIONNAIRE  
Page 2

6. What are your activities (practitioner, basic researcher, observer, etc.)?  
Did you have beneficial contact with others involved in different activities?  
(e.g., As a basic researcher, did you benefit from contact with real applications or the converse?)

Novice MG'er. yes, I benefitted.

7. What were the conference's good and bad points?

good ones have already been mentioned above. Bad one was that we were too crowded with those big tables.

8. In your opinion, was the conference a success or failure?

Success, highly successful

9. Would you like to see another MG Conference (who, when and where)?

Yes, anywhere (who?)

10. Additional comments:

R Sweet

Name Optional

END

DATE  
FILMED

7-84

DTIC